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| EXAMINER | |
|---|---|
| SAIN, GAUTAM | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2176 | |

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/798,474 | SCARDINA ET AL. | |
| | Examiner | Art Unit | |
| | Gautam Sain | 2176 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1) This is a Nonfinal rejection in response to the application filed on 9/4/2003.

2) Claims 1-41 are pending.

3) Effective filing date is 9/4/2003.

### *Claim Rejections - 35 USC § 101*

4) 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4-1) Claims 39-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 39-41 set forth functional descriptive material but fail to set forth physical structures or materials comprising of hardware and software combination within the technological arts (ie., a computer) to produce a "useful, concrete and tangible" result. For example, claims 39-41, the system reads on mental construct or at best a computer program, per se. The language such as "state machine" or "validator", does not clearly define structural elements and are not tangibly embodied on a computer readable medium. Claims 39-41 are interpreted as software per se, and not embodied on a computer readable medium or hardware.

***Claim Rejections - 35 USC § 102***

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**5-1) Claims 1, 2, 4, 7-12, 14, 15, 20 and 23-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Alleshouse (US 6655593, filed Jan 21, 20003).**

**Regarding independent claim 1**, Alleshouse teaches A method comprising the computer-implemented steps of: while an XML processor performs a validation operation on an XML-based input stream, causing said XML processor to generate one or more messages that identify annotations associated with elements in said XML-based input stream. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10). The Examiner interprets the claimed *annotations* as instructions for validation, such as schema elements (as consistent with the specification section). Examiner interprets that Alleshouse errors are generated *while* the processor is analyzing the input XML data stream because upon discovery of an error, the schema validation module rejects that input data and then generates an error message (col 11, lines 8-9).

**Regarding independent claim 13**, Alleshouse teaches A method comprising the computer-implemented steps of: while performing a validation operation on an XML-based input stream, receiving a request for information about the state of said validation operation; and responding to said request by providing said information about said state of said validation operation. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12).

**Regarding independent claim 39**, Alleshouse teaches a validator that validates elements and attributes in an XML-based input stream against information that dictates the structure of corresponding elements and attributes, said validator comprising a state machine that responds to requests for information about validating a first element in said XML-based input stream, while validating said first element. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12). Alleshouse's validation module is interpreted as a state machine because it provides the state of the validation process of the data values with the data elements.

**Regarding claim 2**, Alleshouse teaches XML processor performs said validation operation on said XML-based input stream, receiving requests for said annotations;

wherein the step of causing said XML processor to generate one or more messages is performed in response to said requests. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12).

**Regarding claim 4**, Alleshouse teaches the step of causing said XML processor to generate one or more messages that identify annotations includes causing said XML processor to generate one or more messages that are transmitted in an output stream. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10), where the error message is transmitted back to the source which may trigger human intervention to correct the error, with respect to the final output (col 6, lines 3-18).

**Regarding claims 7-12 and 26-38**, Alleshouse teaches A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claims. Alleshouse teaches XML processor (col 3, line 66).

**Regarding independent claim 14**, Alleshouse teaches the step of receiving a request includes receiving a request regarding whether a first element of said XML-based input stream is defined in corresponding information that dictates the structure of XML data.

Alleshouse discloses two basic types of XML data, XML value data and the XML element name. The XML element names are part of the XML language semantics where an arbitrary label or element name may be selected to represent the XML value data, the use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39).

**Regarding claim 15**, Alleshouse teaches the step of receiving a request includes receiving a request regarding what data type definition is associated with a first element of said XML-based input stream, wherein said data type is defined in information that dictates the structure of corresponding XML data. Alleshouse discloses two basic types of XML data, XML value data and the XML element name. The XML element names are part of the XML language semantics where an arbitrary label or element name may be selected to represent the XML value data, the use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39). Examiner interprets Alleshouse's element name as the data type definition, which defines the XML value data in the input stream.

**Regarding claim 20**, Alleshouse teaches the step of receiving a request includes receiving a request regarding a status of said validation operation with respect to a first element of said XML-based input stream. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12).

**Regarding claim 23**, Alleshouse teaches the step of responding to said request includes providing, in an output stream, said information about the state of said validation operation. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12).

**Regarding claim 24**, Alleshouse teaches parsing said XML-based input stream only once for both of said validation operation and operations that are dictated by annotations associated with elements in said XML-based input stream. Alleshouse discloses an XML processor that is the XML parser (col 3, lines 65-67) that processes two basic types of XML data, XML value data and the XML element name. The XML element names are part of the XML language semantics where an arbitrary label or element name may be selected to represent the XML value data, the use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39). Examiner interprets Alleshouse's element name as the data type definition, which defines the XML value data in the input stream.

**Regarding claim 25**, Alleshouse teaches information that dictates the structure of corresponding XML data in said XML-based input stream, with which said input stream is validated in said validation operation, comprises a plurality of schema definitions that are associated with a plurality of corresponding XML documents that could be constituent to said XML-based input stream. Alleshouse discloses a Native XML

Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10). The Examiner interprets the Alleshouse's labels as XML documents because the bitmap engine utilizes an instream foreign object residing in the stylesheet to direct creation of a bitmap, which is sent to the printer driver for subsequent printing of the label by the printer (col 5, lines 60-64).

**Regarding claim 40**, Alleshouse teaches state machine is able to respond to a request for information about an annotation associated with said first element, while validating elements or attributes in said XML-based input stream. Alleshouse discloses a Native XML Printer (Title) that validates the XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10) upon a request for schema (col 7, lines 5-12). The Examiner interprets the claimed *annotations* as instructions for validation, such as schema elements (as consistent with the specification section). Examiner interprets that Alleshouse errors are generated *while* the processor is analyzing the input XML data stream because upon discovery of an error, the schema validation module rejects that input data and then generates an error message (col 11, lines 8-9).

**Regarding claim 41**, Alleshouse teaches state machine is able to respond to a request that is responsive to an event in a parsed output stream that is based on said XML-based input stream. Alleshouse discloses a Native XML Printer (Title) that validates the

XML data stream based upon the schema (Abstract), where if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10), where the error message is transmitted back to the source which may trigger human intervention to correct the error, with respect to the final output (col 6, lines 3-18).

***Claim Rejections - 35 USC § 103***

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**6-1) Claims 3, 5, 6, 16-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alleshouse (as cited above).**

**Regarding claims 3 and 21**, Alleshouse does not expressly teaches the step of receiving requests includes receiving a request via an application program interface through which information about said validation operation can be requested by an external application, but Alleshouse does teach a user interface with various input devices (col 3, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of a user interface with input devices that can be used for requesting though a user interface as equivalent to a application program interface, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode

printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding claim 5**, Alleshouse does not expressly teaches the step of causing said XML processor to generate one or more messages that identify annotations includes causing said XML processor to generate one or more messages before completion of said validation operation on said XML-based input stream, but Alleshouse discloses a schema validation module that will reject the validation and will return an error message (col 11, lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of a schema validation module that will reject the validation and will return an error message as equivalent to generating message(s) before completion of the validation application program interface because the error message is detected while executing and immediately returned back upon discovery of the error condition, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding claim 6**, Alleshouse does not expressly teach the validation operation includes performing a validation operation on a first element of said XML-based input stream; and wherein the step of causing said XML processor to generate one or more messages includes causing said XML processor to generate one or more messages that identify an annotation associated with said first element, only if said first element is

determined valid based on said validation operation on said first element, but Alleshouse does disclose validating the XML input data stream for the underlying value data that is processed by the bitmap rendering engine which, upon no errors, creates a bitmap that that is sent to the printer drivers for subsequent printer label. Alleshouse also teaches that if a validation is successful, then the styles sheet is applied (col 5, lines 40-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of validating the XML input data stream for the underlying value data that is processed by the bitmap rendering engine which, upon no errors, creates a bitmap that that is sent to the printer drivers for subsequent printer label as equivalent to the claimed invention because it is equivalent functionality of when there is no error situation and a successful execution, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding claim 16**, Alleshouse does not expressly teach the step of receiving a request includes receiving a request regarding what data type definition is associated with an attribute of said first element, wherein said data type that is associated with said attribute is defined in said information that dictates the structure of corresponding XML data, but Alleshouse does disclose receiving the XML input data stream from an external source and performs the required functions on the provided input data stream (col 5, lines 27-38), where the XML element names are part of the XML language

semantics where an arbitrary label or element name may be selected to represent the XML value data, the use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39). Examiner interprets Alleshouse's element name as the data type definition, which defines the XML value data in the input stream.

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of receiving the XML input data stream from an external source (such as an ERP) and performs the required functions on the provided input data stream as equivalent to the claimed invention of receiving a request because the external source in Alleshouse is doing the requesting of printed data according to a specific structure by providing input data and requiring functionality from the XML processor to service the need of the external source, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding claim 17**, Alleshouse does not expressly teach the step of receiving a request includes receiving a request regarding whether a data type of content of a first element of said XML-based input stream conforms to a corresponding data type definition in information that dictates the structure of corresponding XML data, but Alleshouse does disclose receiving the XML input data stream from an external source and performs the required functions on the provided input data stream (col 5, lines 27-38), where the XML element names are part of the XML language semantics where an

arbitrary label or element name may be selected to represent the XML value data, the use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39). Examiner interprets Alleshouse's element name as the data type definition, which defines the XML value data in the input stream.

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of receiving the XML input data stream from an external source (such as an ERP) and performs the required functions on the provided input data stream as equivalent to the claimed invention of receiving a request because the external source in Alleshouse is doing the requesting of printed data according to a specific structure by providing input data and requiring functionality from the XML processor to service the need of the external source, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding claim 18**, Alleshouse does not expressly teach the step of receiving a request includes receiving a request regarding a first annotation that is associated with a first element of said XML-based input stream, wherein said first annotation is defined in information that dictates the structure of corresponding XML data, but Alleshouse does disclose receiving the XML input data stream from an external source and performs the required functions on the provided input data stream (col 5, lines 27-38), where the XML element names are part of the XML language semantics where an arbitrary label or element name may be selected to represent the XML value data, the

use of which is defined by the XML language. Typically, the element names appear between angled bracket (col 4, lines 28-39). Examiner interprets Alleshouse's element name as the data type definition, which defines the XML value data in the input stream.

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of receiving the XML input data stream from an external source (such as an ERP) and performs the required functions on the provided input data stream as equivalent to the claimed invention of receiving a request because the external source in Alleshouse is doing the requesting of printed data according to a specific structure by providing input data and requiring functionality from the XML processor to service the need of the external source, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**Regarding independent claim 19**, Alleshouse does not expressly teach information that dictates the structure of corresponding XML data comprises a second annotation definition that is associated with a second element of said XML-based input stream, and wherein the step of receiving a request includes receiving a request regarding said second annotation, the method further comprising the computer-implemented step of: before responding to said request regarding said second annotation, responding to a request regarding whether said first element is defined in said information that dictates the structure of corresponding XML data, but Alleshouse does suggest it because Alleshouse discloses if any of the schema criteria are not met by the data in the XML

input data stream, the schema validation module will reject it and will return an error message (col 11, lines 1-10). Examiner interprets that Alleshouse errors are generated *while* the processor is analyzing the input XML data stream because upon discovery of an error, the schema validation module rejects that input data and then generates an error message (col 11, lines 8-9) and before the processor moves on to another input data stream item, it will generate the error message back to the requesting source.

It would have been obvious to one of ordinary skill in the art at the time of the invention to interpret Alleshouse's disclosure of if any of the schema criteria are not met by the data in the XML input data stream, the schema validation module will reject it and will return an error message as equivalent to the claimed invention of receiving a request because the external source is doing the requesting of printed data according to a specific structure by providing input data and requiring functionality from the XML processor to service the need of the external source, providing the benefit of self-validating open standard to implement a change in form of a label for use of a format in which to provide data to a barcode printer where the data is understandable by a human reading the data (Alleshouse, col 2, lines 12-18).

**6-2) Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alleshouse (as cited above), in view of Slaughter et al (US 6643650, filed Sep 12, 2000).**

**Regarding claim 22**, Alleshouse does not teach the step of receiving a request includes receiving a request from an event handler sent in response to an event

received in a parser output stream, but Slaughter does suggest it. Slaughter discloses a mechanism for using messages to look up documents stored in spaces in a distributed computing environment, where the consumer supplies an event handler callback method to the event gate calls each handler, passing the XML event document as a parameter (col 32, lines 23-30). Additionally, the message gates support publishing messages for events for an XML schema that indicates a set of one or more events that published (col 31, lines 61-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include an event handler callback method as described by Slaughter, providing the benefit of providing information about computing resources such as printers by providing XML messages in a distributed computing environment (col 8, line 3-8).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam Sain whose telephone number is 571-272-4096. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GS 6/7/6
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